

**REMARKS**

In the Office Action, the Examiner rejected claims 1-28. By this paper, Applicants amended claims 1-6, 8, and 20 for clarification of certain features to expedite allowance of the present application. These amendments do not add any new matter. Upon entry of these amendments, claims 1-28 remain pending in the present application and are believed to be in condition for allowance. In view of the foregoing amendments and the following remarks, Applicants respectfully request reconsideration and allowance of all pending claims.

**Objection to the Specification**

In the Office Action, the Examiner objected to the disclosure stating that reference character "110" has been used to designate both circuit board and motor controller (Specification page 7). Applicants amended the specification as set forth above. In view of this amendment, Applicants respectfully request the Examiner withdraw the objection to the specification.

**Objection to the Drawings**

In the Office Action, the Examiner objected to the drawings under 37 C.F.R. § 1.83(a). The Examiner specifically stated that the finger guard must be shown or the feature(s) canceled from the claim(s). Applicants respectfully traverse this rejection. FIGS. 3 and 4 of the drawings include a guard 86. *See* Specification [0020]. In light of the disclosed feature, Applicants assert that the drawings show every feature of the invention specified in the claims. Accordingly, Applicants respectfully request the Examiner withdraw the objection to the drawings.

**Claim Rejections under 35 U.S.C. § 112, Second Paragraph**

The Examiner rejected claims 1, 3-5, and 20 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Although Applicants believe that

claims 1, 3-5, and 20, as originally presented, are sufficiently clear and definite, Applicants have amended claims 1-5 and 20 in the interest of clarification. Accordingly, Applicants respectfully request withdrawal of the Examiner's rejection under 35 U.S.C. § 112, second paragraph.

**Claim Rejections under 35 U.S.C. § 103(a)**

The Examiner rejected claims 1-24 under 35 U.S.C. § 103(a) as being unpatentable over Von der Heide (U.S. Patent No. 5,652,70, hereinafter "Von der Heide") and rejected claims 25-28 under 35 U.S.C. § 103(a) as being unpatentable over Von der Heide in view of Yokozawa et al. (U.S. Patent No. 5,910,694, hereinafter "Yokozawa"). The Applicants respectfully traverse these rejections.

***Legal Precedent***

First, the burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d. 1430 (Fed. Cir. 1990). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). The Examiner must provide objective evidence, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002). Moreover, a statement that the proposed modification would have been "well within the

ordinary skill of the art" based on individual knowledge of the claimed elements cannot be relied upon to establish a *prima facie* case of obviousness without some *objective reason to combine* the teachings of the references. *Ex parte Levengood*, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993); *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d. 1313, 1318 (Fed. Cir. 2000); *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d. 1161 (Fed. Cir. 1999).

Moreover, the M.P.E.P. specifically states that when employing the legal precedent provided in a prior legal decision, "if the facts in a prior legal decision are sufficiently similar to those in an application under examination, the examiner may use the rationale used by the court. M.P.E.P § 2144.04. If the applicant has demonstrated the criticality of a specific limitation, it would not be appropriate to rely solely on case law as the rationale to support an obviousness rejection. *Id.* Thus, it is not proper to rely solely on a case citation as evidencing sufficient rational for a *prima facie* obviousness rejection if the facts are not sufficiently similar or a specific limitation is critical.

Further, any rejection based on assertions that a fact is well-known or is common knowledge in the art without documentary evidence to support the examiner's conclusion should be judiciously applied. M.P.E.P § 2144.03. Furthermore, as noted by the court in *Ahlert*, any facts so noticed should be of notorious character and serve only to "fill in the gaps" in an insubstantial manner which might exist in the evidentiary showing made by the examiner to support a particular ground for rejection. *Id.* It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based. *See Zurko*, 258 F.3d at 1386, 59 U.S.P.Q.2d at 1697; *Ahlert*, 424 F.2d at 1092, 165 U.S.P.Q. 421; M.P.E.P § 2144.03.

***The Examiner's Assertion that Claim Limitations are Merely a Design Consideration is Misplaced and Unsupported***

Independent claims 1-24 recite features including limitations relating to blade height, impeller diameter, chord length, stagger angle, camber, solidity, the number of blades, magnet composition, and bearing design, among other recited features. In the Office Action, the Examiner specifically stated:

Von der is silent about the blades being at least 25% of the impeller diameter, selecting an appropriate chord length, stagger angle and camber angle. However, selecting a height, chord length, a stagger angle and camber angle for the blades would have been a mere design consideration which fails to patentably distinguish over Von der and which would have been within the level of one of ordinary skill in the art at the time the invention was made.

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Although Applicants do not suggest or intend that the specification should be read into the claims, the Applicants stress that the specification provides content and meaning to the present claims. Moreover, the specification strongly indicates that the claimed subject matter is not merely a matter of design choice as suggested by the Examiner. In view of the legal precedent cited above regarding the "criticality" of claim features, the Applicants stress that the claimed subject matter includes many features that strongly impact the efficiency, output, noise, and other characteristics of the fan. As disclosed in the present specification, the fan configuration is specifically configured to produce desired flow characteristics when the fan is operating and to minimize the resistance to air flow when the fan is idle. Specification [0029]. For instance, the design provides for a desired air flow rate at a desired pressure at a given rotational speed of the impeller when the fan is operating. *Id.* at [0027]. When the fan is idle, the design of the fan also increases the overall efficiency of the operating fan and reduces the amount of audible airflow noise due to the decreased resistance. *Id.* For example, as described in the Applicants' specification, the low solidity produced by having a smaller chord near the

hub hinders stall at a speed below 200 CFM. *Id.* at [0030]. As a further example, the camber of the blades minimizes interference between the impellers by producing low blade trailing edge angles. *Id.* at [0031]. The design of the bearing enables a greater amount of grease to be placed within the bearing to reduce friction and increase bearing life from approximately 45,000 to 150,000 hours. Finally, the efficiency of the motor may be increased with the design's use of a bonded neodymium-iron-boron magnet that does not produce a cogging torque. Thus, the above recited claims limitations, among other recited limitations, are critical to the design of the fan in view of the forgoing legal precedent. To suggest that the purposeful selection of specific configurations for the fan to increase efficiency, reduce audible noise, and increase bearing life is simply a matter of mere design consideration undermines the scope of the present application entirely. Accordingly, Applicants traverse this rejection in view of M.P.E.P. § 2144.03 and § 2144.04 and request that the Examiner properly cite one or more references disclosing this subject matter if the Examiner chooses to maintain the rejection of these claims.

Further, the Examiner did not even attempt to identify any portions of the cited references that disclosed the claimed elements along with the necessary suggestion to combine or modify the references. Instead of allowing these claims in accordance with the Examiner's duty, the Examiner relied largely on statements that such claimed subject matter is "within the level of ordinary skill in the art at the time the invention was made," or a matter of "mere design consideration" or "design choice." Thus, the Examiner has provided absolutely no evidence whatsoever that the subject matter of the claims is obvious in view of the cited references. Rather, the Examiner has apparently relied on Official Notice to reject this subject matter. Applicants respectfully submit that the Examiner's apparent reliance on Official Notice is wholly improper and unsupported. Therefore, in accordance with M.P.E.P. 2144.03, if the Examiner chooses to maintain this rejection, Applicants respectfully request that the Examiner provide evidence in the form of one or more prior art references. Such additional reference or references must be properly cited in combination with the references of record, and the citation should

include identification of the claimed elements and identification of the necessary suggestion to combine or modify the elements in the manner set forth in the claims.

For at least these reasons, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 103.

***Claimed Features Omitted from Independent Claims 1 and 11***

Turning to the claims, the present independent claim 1 recites, *inter alia*, “an impeller comprising a hub to house the three-phase DC motor and a plurality of blades extending from the hub.” Similarly, independent claim 11 recites, *inter alia*, “an impeller having a hub and a plurality of blades extending from the hub to a tip.” In the Office Action, the Examiner specifically stated:

Von der Heide teaches a cooling fan comprising: a three-phase DC motor, an impeller comprising a hub to house said motor and a plurality of blades 141 extending from the hub.

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The Examiner's rejection is flawed for a number of reasons. The Von der Heide reference does not teach or suggest, alone or in combination, an impeller comprising a hub, as recited by independent claims 1 and 11. The cited reference also fails to teach or suggest a plurality of blades extending from the hub. The cited reference focuses on the design of a drive motor. At best, the reference states that “this invention pertains to drive motors such as are used in disc drives and like devices such as, for example, axial flow cooling fans.” Von der Heide, col. 1, ll. 27-29. The Von der Heide reference does not disclose an impeller, hub, or blades extending from the hub as recited by independent claims 1 and 11. In view of these deficiencies, the cited references, taken alone or in combination, cannot render obvious the current independent claims 1 and 11 and their dependent claims.

For at least these reasons, Applicants respectfully request withdrawal of the rejection of independent claims 1 and 11 and claims depending therefrom under 35 U.S.C. § 103.

***Claimed Features Omitted from Independent Claim 18***

Independent claim 18 recites, *inter alia*, “a second cooling fan in series with the first cooling fan.” The Examiner has rejected claim 1-24 as recited above, but has failed to address the limitations of claim 18. Neither the Von der Heide reference nor the Yokoawa reference provides any teaching, suggestion or motivation to add a second cooling fan in series with the first cooling fan. In view of these deficiencies among others, the cited references, taken alone or in combination, cannot render obvious the current dependent claim 18.

For at least these reasons, Applicants respectfully request withdrawal of the rejection of dependent claim 18 under 35 U.S.C. § 103.

***Claimed Features Omitted from Independent Claim 25***

Independent claim 25 recites, *inter alia*, “a finger guard secured to each end of the fan housing, the finger guard being displaced outward relative to the fan housing, wherein the fan housing comprises a top that extends over each finger guard.” In the Office Action, the Examiner specifically stated:

...Von der Heide does not teach a guard. Yokozawa discloses a fan guard as seen in the figures. It would have been obvious to one of ordinary skill in the art to provide a fan finger guard, as a finger guard are well known accessories and are available for most AC DC fans to protect the user.

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The Examiner's rejection is flawed as the cited references do not teach or suggest, alone or in combination, a “finger guard” as recited by the present claims. The Examiner

has relied on Yokozawa as disclosing a fan guard; however, the specification appears to make no reference to a "finger guard." At best, the Yokozawa reference discloses a heat sink 112, 212 and a housing 425 that are proximate to the fan blade. Thus, the cited references do not teach or suggest, alone or in combination, the "finger guard being displaced outward relative to the fan housing" or a "top that extends over each finger guard" as recited by the present claims.

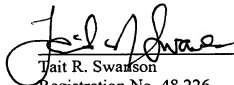
For at least these reasons, Applicants respectfully request withdrawal of the rejection of independent claim 25 and the claims depending therefrom under 35 U.S.C. § 103.

**Conclusion**

Applicants respectfully submit that all pending claims should be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve any other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

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Jait R. Swanson  
Registration No. 48,226  
(281) 970-4545

**HEWLETT-PACKARD COMPANY**

Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, Colorado 80527-2400